TDMX

TOP DRILL™ MODULAR X



STABILITY AND RELIABILITY COMBINED INTO ONE MODULAR DRILL SYSTEM

WIDIA™ TOP DRILL Modular X (TDMX) is the ultimate choice for high-demanding drilling applications when stability and reliability are required.

GENERAL ENGINEERING

ENERGY

TRANSPORTATION

NEW!

Platform

Standard cutter bodies in 1.5 x D, 3 x D, 5 x D, 8 x D, and 12 x D.

Insert diameter range from 16mm up to 40mm.

One geometry and grade to cover steel and cast iron applications.



Easy to Apply

Front clamping design. No need to disassemble the body from the holder to change insert.

Easy insert nomenclature logic to identify the targeted material group.

Increased Stability and Performance

Highly engineered pocket seat design to ensure maximum stability, even in challenging applications like cross hole, inclined entry/exit, and interrupted cuts.

Suitable for high feed rates.

Flanged shank for higher rigidity.

Polished flutes for improved chip evacuation.

Brand new WP40PD grade for longer tool life in steel and cast iron applications.

NEW!

FPE: P, M, K Flat bottom drilling, stacked plates, piloting for deep-hole drilling.
New 1.5 x D and 12 x D bodies

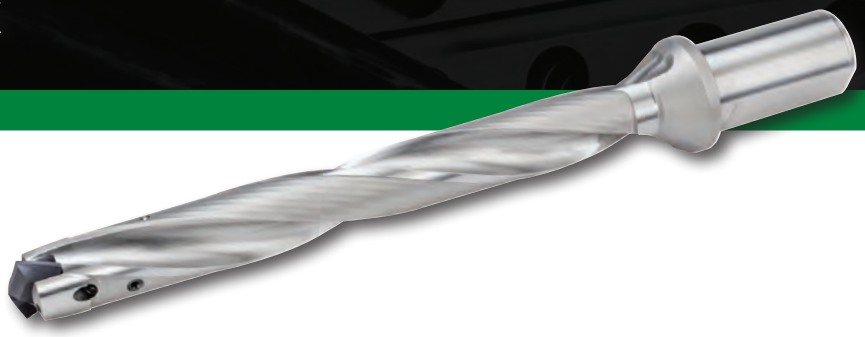


WIDIA™

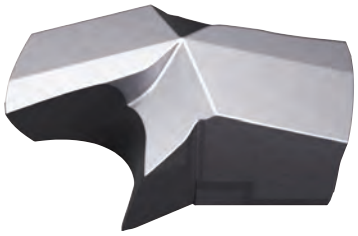
widia.com

TDMX — TOP DRILL™ Modular X

Modular Drills • TOP DRILL Modular X



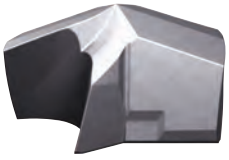
- Augmented insert stability thanks to the highly engineered pocket seat design.
- Front clamping for an easy insert change, without disassembling the holder from the machine spindle.
- Diameter range from 16mm up to 40mm.
- L/D ratio of 1.5 x D, 3 x D, 5 x D, 8 x D, and 12 x D.





One geometry to cover two material groups in modular drilling.

PK(M)



P K

First choice for Steel and Cast Iron drilling.

NEW!

FPE(M)



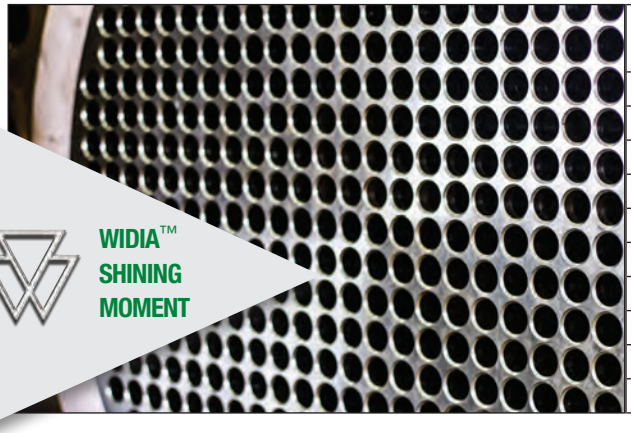
P M K

Flat bottom drilling, stacked plates, piloting for deep-hole drilling.

TDMX — Tube Sheet Drilling

P Steel

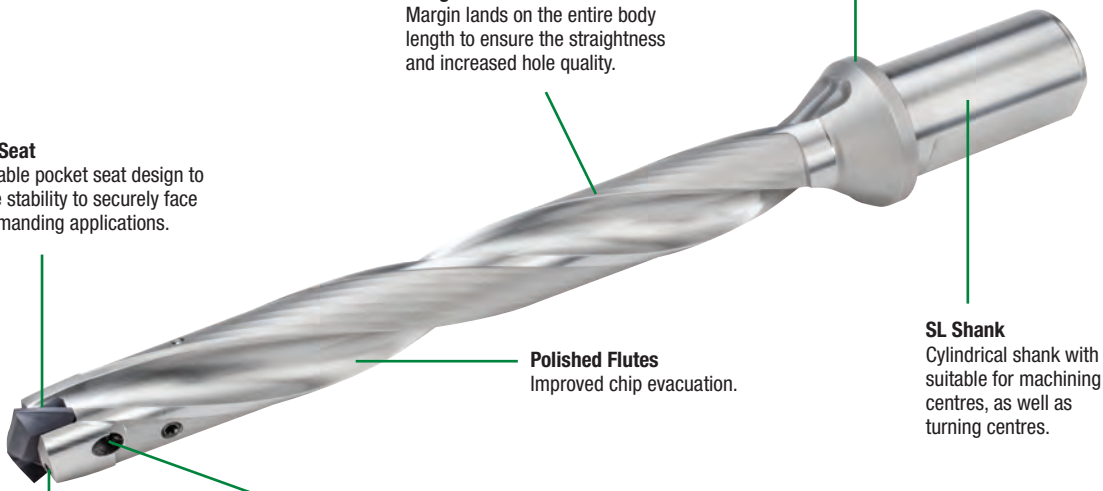
Material: Fe510/1.0553/A441
Condition: rough surface



WIDIA™ SHINING MOMENT

Specifications	Competitor	WIDIA
Diameter (mm)	25,6	25,6
Grade	–	WP40PD
Geometry	–	PK
Vc (m/min)	100	100
n (rev/min)	1,247	1,247
f (mm/rev)	0,33	0,35
Vf (mm/min)	400	437
LOC (mm)	50	50
Coolant	Internal Emulsion	Internal Emulsion
Tool Life (m)	30	48

TDMX Body — Technical Details



Flanged Shank
Increase the overall drill stability, above all in deep-drilling applications.

Margins
Margin lands on the entire body length to ensure the straightness and increased hole quality.

Pocket Seat
Extra-stable pocket seat design to increase stability to securely face high-demanding applications.

Polished Flutes
Improved chip evacuation.

SL Shank
Cylindrical shank with flat: suitable for machining centres, as well as turning centres.

Front Clamping
Two standard screws to clamp and unclamp the insert, without disassembling the tool from the holder.

Coolant Channels
Coolant channel exit right behind the cutting edge.

TDMX Pocket Seat — Technical Details



Double-Seating Angle
Ensure the maximum stability under severe cutting conditions.

Coolant Channels

Clamping Screw
Front clamping for an easy-to-change insert.

Gash
Gash is included in the carbide tip geometry to protect the steel body from the chips.

Ejection Pin
Necessary to remove the insert due to the extreme tight pocket seat tolerance.

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TDMX Components

Drilling is not always a simple, straightforward job. Workpiece instability, vibrations, and chip control are just a few challenges typically encountered in drilling applications. In addition to these challenges, the cost per hole becomes a critical subject in many shops with pressure to achieve sustainable production at the lowest cost possible. The TOP DRILL Modular X (TDMX) holemaking solution is able to address such machining applications and economic requirements with ease.

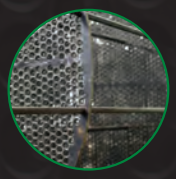
Tube sheets, baffles, I-beams, valves, axles, and track drive units are just a few examples of components that can be machined with more confidence thanks to the TDMX drill, its material-specific inserts, and optimised body design.

The combination of an extra stable pocket seat design, reinforced cutting corners, and a through grade, ensures increased process reliability and consequently longer tool life associated, with better hole quality.

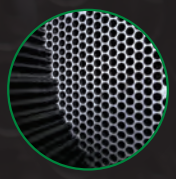
The WP40PD grade provides the right toughness to face even the most unstable cutting conditions while also suitable for MQL applications.

The PK(M) point geometry is designed to operate high feed rates and provide the right guidance for improved hole straightness.

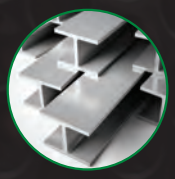
The FPE(M) flat bottom geometry is the solution to address the most challenging operations such as thin stack plate drilling, half holes, and any other applications where the standard 140° shows limits. FPE(M) can also be used as pilot for deep-hole drills.



Baffles



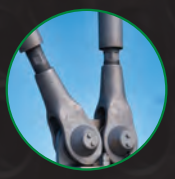
Tube Sheets



I-Beams



Valves



Cable Tensioner - Post Tension System

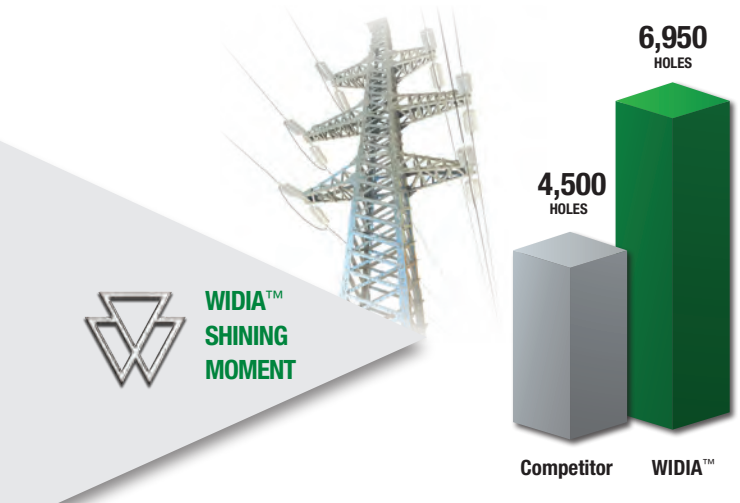


Axles



Track Drive Components

Longer tool life, reliability, and increased chip control on a steel structural component for a high-voltage electrical line customer



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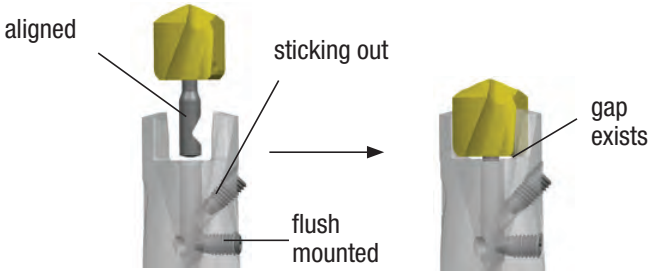
Specifications	Competitor	WIDIA
Tool body	Dia. 17mm 3 x D	TDMX
Insert	–	TDMX
Grade	–	WP40PD
Diameter	17,99mm	18mm
L/D Ratio	1.5 x D	3 x D
LOC	20mm (.787")	20mm (.787")
Cutting Speed Vc	70m/min (210 SFM)	70m/min 210sfm
Feed Rate in	0,25mm/rev (.0098 IPR)	.25mm/rev (.0098ipr)
Coolant	Internal MQL	
Tool Life	4500 Holes	6950 Holes

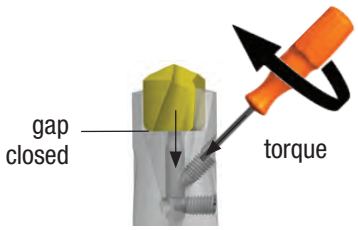
Assembling and Disassembling Instructions

Assembly

1 Insert positioning



2 Insert clamping



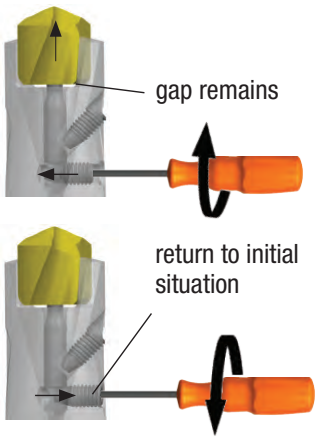
Drill diameter	Torque
ø 16–19,999mm	1,5 Nm
ø 20–23,999mm	2,1 Nm
ø 24–27,999mm	3,0 Nm
ø 28–40,000mm	4,5 Nm

Disassembly

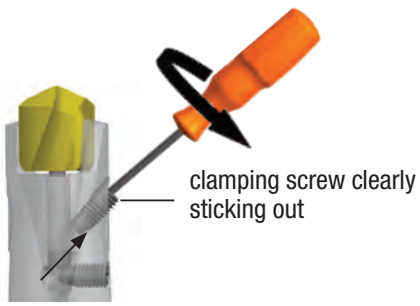
1 Clamping screw loosening



2 Insert pushing out



3 Further clamping screw loosening



4 Insert removal



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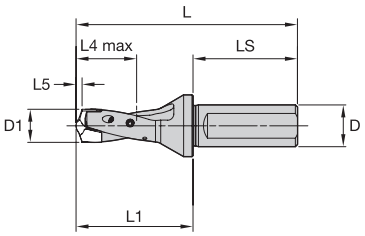
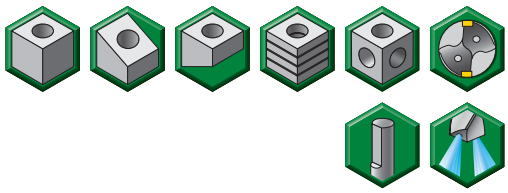
TDMX • 1.5 x D • Side Lock Shank • Metric



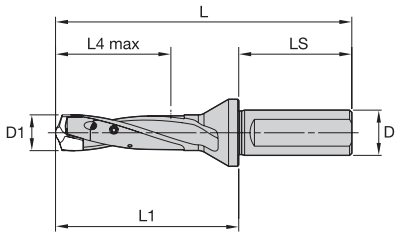


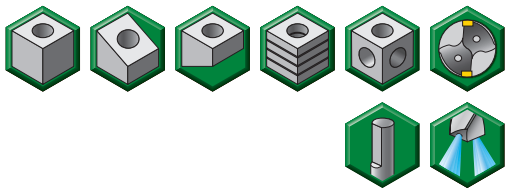


order number	catalogue number	SSC	D1	D1 max	LS	D	L	L1	L4 max
6680951	TDMX160R1SL20M	A	16,000	16,999	50	20	106	56	26
6680952	TDMX170R1SL20M	B	17,000	17,999	50	20	109	59	27
6680953	TDMX180R1SL25M	C	18,000	18,999	56	25	118	62	29
6680954	TDMX190R1SL25M	D	19,000	19,999	56	25	121	65	30
6680955	TDMX200R1SL25M	E	20,000	20,999	56	25	124	68	32
6680956	TDMX210R1SL25M	F	21,000	21,999	56	25	127	71	33
6680957	TDMX220R1SL25M	G	22,000	22,999	56	25	130	74	35
6680958	TDMX230R1SL25M	H	23,000	23,999	56	25	133	77	36
6680959	TDMX240R1SL32M	I	24,000	24,999	60	32	140	80	38
6680960	TDMX250R1SL32M	J	25,000	25,999	60	32	143	83	39
6680971	TDMX260R1SL32M	K	26,000	26,999	60	32	146	86	41
6680972	TDMX270R1SL32M	L	27,000	27,999	60	32	149	89	42
6680973	TDMX280R1SL32M	M	28,000	28,999	60	32	152	92	44
6680974	TDMX290R1SL32M	N	29,000	29,999	60	32	155	95	45
6680975	TDMX300R1SL32M	O	30,000	30,999	60	32	158	98	47
6680976	TDMX310R1SL32M	P	31,000	31,999	60	32	161	101	48

NOTE: SSC = Pocket Seat Reference. To correspond with the SSC on the inserts.
L5 is dependent on the insert.

TDMX • 3 x D • Side Lock Shank • Metric





order number	catalogue number	SSC	D1	D1 max	LS	D	L	L1	L4 max
6572091	**TDMX160R3SL20M**	A	16,000	16,999	50	20	131	81	51
6572092	**TDMX170R3SL20M**	B	17,000	17,999	50	20	136	86	54
6572093	**TDMX180R3SL25M**	C	18,000	18,999	56	25	146	90	57
6572094	**TDMX190R3SL25M**	D	19,000	19,999	56	25	151	95	60
6572096	**TDMX200R3SL25M**	E	20,000	20,999	56	25	155	99	63
6572097	**TDMX210R3SL25M**	F	21,000	21,999	56	25	160	104	66
6572098	**TDMX220R3SL25M**	G	22,000	22,999	56	25	164	108	69
6572099	**TDMX230R3SL25M**	H	23,000	23,999	56	25	169	113	72
6572100	**TDMX240R3SL32M**	I	24,000	24,999	60	32	177	117	75
6572101	**TDMX250R3SL32M**	J	25,000	25,999	60	32	182	122	78
6572102	**TDMX260R3SL32M**	K	26,000	26,999	60	32	186	126	81
6572104	**TDMX270R3SL32M**	L	27,000	27,999	60	32	191	131	84
6572105	**TDMX280R3SL32M**	M	28,000	28,999	60	32	195	135	87
6572106	**TDMX290R3SL32M**	N	29,000	29,999	60	32	200	140	90
6572107	**TDMX300R3SL32M**	O	30,000	30,999	60	32	204	144	93
6572108	**TDMX310R3SL32M**	P	31,000	31,999	60	32	209	149	96
6572109	**TDMX320R3SL40M**	Q	32,000	33,999	70	40	228	158	102
6572110	**TDMX340R3SL40M**	R	34,000	35,999	70	40	237	167	108
6572121	**TDMX360R3SL40M**	S	36,000	37,999	70	40	246	176	114
6572122	**TDMX380R3SL40M**	T	38,000	40,000	70	40	255	185	120

NOTE: SSC = Pocket Seat Reference. To correspond with the SSC on the inserts.
L5 is dependent on the insert.

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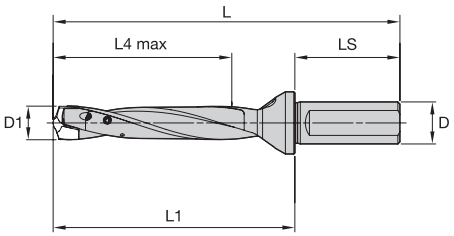
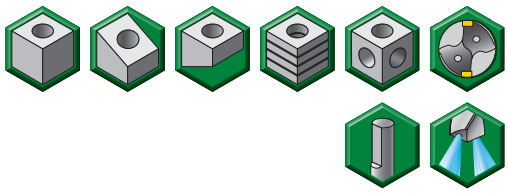
TDMX • 5 x D • Side Lock Shank • Metric





order number	catalogue number	SSC	D1	D1 max	LS	D	L	L1	L4 max
6572125	TDMX160R5SL20M	A	16,000	16,999	50	20	165	115	85
6572126	TDMX170R5SL20M	B	17,000	17,999	50	20	172	122	90
6572127	TDMX180R5SL25M	C	18,000	18,999	56	25	184	128	95
6572128	TDMX190R5SL25M	D	19,000	19,999	56	25	191	135	100
6572129	TDMX200R5SL25M	E	20,000	20,999	56	25	197	141	105
6572130	TDMX210R5SL25M	F	21,000	21,999	56	25	204	148	110
6572141	TDMX220R5SL25M	G	22,000	22,999	56	25	210	154	115
6572142	TDMX230R5SL25M	H	23,000	23,999	56	25	217	161	120
6572143	TDMX240R5SL32M	I	24,000	24,999	60	32	227	167	125
6572144	TDMX250R5SL32M	J	25,000	25,999	60	32	234	174	130
6572145	TDMX260R5SL32M	K	26,000	26,999	60	32	240	180	135
6572146	TDMX270R5SL32M	L	27,000	27,999	60	32	247	187	140
6572147	TDMX280R5SL32M	M	28,000	28,999	60	32	253	193	145
6572148	TDMX290R5SL32M	N	29,000	29,999	60	32	260	200	150
6572149	TDMX300R5SL32M	O	30,000	30,999	60	32	266	206	155
6572150	TDMX310R5SL32M	P	31,000	31,999	60	32	273	213	160
6572151	TDMX320R5SL40M	Q	32,000	33,999	70	40	296	226	170
6572152	TDMX340R5SL40M	R	34,000	35,999	70	40	309	239	180
6572153	TDMX360R5SL40M	S	36,000	37,999	70	40	322	252	190
6572154	TDMX380R5SL40M	T	38,000	40,000	70	40	335	265	200

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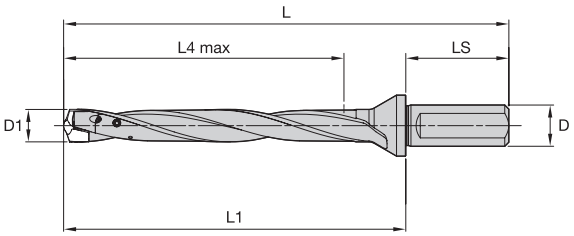
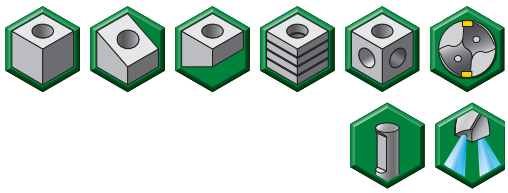
L5 is dependent on the insert.

TDMX • 8 x D • Side Lock Shank • Metric





order number	catalogue number	SSC	D1	D1 max	LS	D	L	L1	L4 max
6572155	**TDMX160R8SL20M**	A	16,000	16,999	50	20	216	166	136
6572156	**TDMX170R8SL20M**	B	17,000	17,999	50	20	226	176	144
6572157	**TDMX180R8SL25M**	C	18,000	18,999	56	25	241	185	152
6572158	**TDMX190R8SL25M**	D	19,000	19,999	56	25	251	195	160
6572159	**TDMX200R8SL25M**	E	20,000	20,999	56	25	260	204	168
6572160	**TDMX210R8SL25M**	F	21,000	21,999	56	25	270	214	176
6572171	**TDMX220R8SL25M**	G	22,000	22,999	56	25	279	223	184
6572172	**TDMX230R8SL25M**	H	23,000	23,999	56	25	289	233	192
6572173	**TDMX240R8SL32M**	I	24,000	24,999	60	32	302	242	200
6572174	**TDMX250R8SL32M**	J	25,000	25,999	60	32	312	252	208
6572175	**TDMX260R8SL32M**	K	26,000	26,999	60	32	321	261	216
6572176	**TDMX270R8SL32M**	L	27,000	27,999	60	32	331	271	224
6572177	**TDMX280R8SL32M**	M	28,000	28,999	60	32	340	280	232
6572178	**TDMX290R8SL32M**	N	29,000	29,999	60	32	350	290	240
6572179	**TDMX300R8SL32M**	O	30,000	30,999	60	32	359	299	248
6572180	**TDMX310R8SL32M**	P	31,000	31,999	60	32	369	309	256
6572181	**TDMX320R8SL40M**	Q	32,000	33,999	70	40	398	328	272
6572182	**TDMX340R8SL40M**	R	34,000	35,999	70	40	417	247	288
6572183	**TDMX360R8SL40M**	S	36,000	37,999	70	40	436	366	304
6572184	**TDMX380R8SL40M**	T	38,000	40,000	70	40	455	385	320

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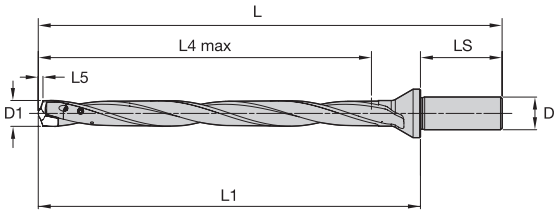
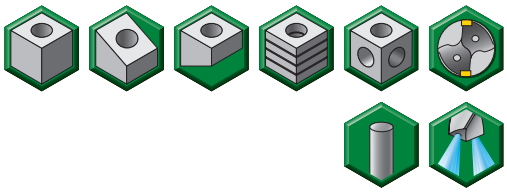
TDMX • 12 x D • Flanged Round Shank • Metric

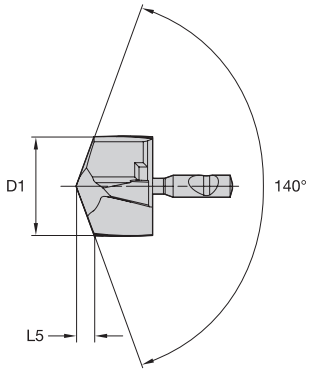


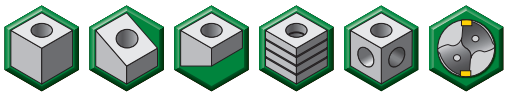


order number	catalogue number	SSC	D1	D1 max	LS	D	L	L1	L4 max
6681017	TDMX160R12SF20M	A	16,000	16,999	50	20	284	234	204
6681018	TDMX170R12SF20M	B	17,000	17,999	50	20	298	248	216
6681019	TDMX180R12SF25M	C	18,000	18,999	56	25	317	261	228
6681020	TDMX190R12SF25M	D	19,000	19,999	56	25	331	275	240
6681041	TDMX200R12SF25M	E	20,000	20,999	56	25	344	288	252
6681042	TDMX210R12SF25M	F	21,000	21,999	56	25	358	302	264
6681043	TDMX220R12SF25M	G	22,000	22,999	56	25	371	315	276
6681044	TDMX230R12SF25M	H	23,000	23,999	56	25	385	329	288
6681045	TDMX240R12SF32M	I	24,000	24,999	60	32	402	342	300
6681046	TDMX250R12SF32M	J	25,000	25,999	60	32	416	356	312
6681047	TDMX260R12SF32M	K	26,000	26,999	60	32	429	369	324
6681049	TDMX270R12SF32M	L	27,000	27,999	60	32	443	383	336
6681050	TDMX280R12SF32M	M	28,000	28,999	60	32	456	396	348
6681051	TDMX290R12SF32M	N	29,000	29,999	60	32	470	410	360
6681052	TDMX300R12SF32M	O	30,000	30,999	60	32	483	423	372
6681053	TDMX310R12SF32M	P	31,000	31,999	60	32	497	437	384

NOTE: SSC = Pocket Seat Reference. To correspond with the SSC on the inserts.
L5 is dependent on the insert.

TDMX • Inserts • PK(M)





● first choice
○ alternate choice

P		●
M		○
K		●
N		
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catalogue number	D1	L5	SSC	WP40PD
TDMX16000PKM	16,00	3,21	A	**6568446**
TDMX16200PKM	16,20	3,25	A	**6568447**
TDMX16281PKM	16,28	3,26	A	**6568448**
TDMX16500PKM	16,50	3,30	A	**6568449**
TDMX16667PKM	16,67	3,33	A	**6568450**
TDMX17000PKM	17,00	3,39	B	**6568461**
TDMX17064PKM	17,06	3,41	B	**6568462**
TDMX17463PKM	17,46	3,48	B	**6568464**
TDMX17500PKM	17,50	3,49	B	**6568465**
TDMX17600PKM	17,60	3,50	B	**6568467**
TDMX17800PKM	17,80	3,54	B	**6568471**
TDMX17859PKM	17,86	3,55	B	**6568472**
TDMX18000PKM	18,00	3,58	C	**6568473**
TDMX18255PKM	18,26	3,64	C	**6568474**
TDMX18500PKM	18,50	3,68	C	**6568475**
TDMX18651PKM	18,65	3,71	C	**6568476**
TDMX18800PKM	18,80	3,74	C	**6568477**
TDMX19000PKM	19,00	3,78	D	**6568478**
TDMX19050PKM	19,05	3,78	D	**6568479**
TDMX19200PKM	19,20	3,81	D	**6568480**
TDMX19270PKM	19,27	3,82	D	**6568481**
TDMX19450PKM	19,45	3,86	D	**6568482**
TDMX19500PKM	19,50	3,87	D	**6568483**
TDMX19700PKM	19,70	3,90	D	**6568484**
TDMX19840PKM	19,84	3,93	D	**6568485**
TDMX20000PKM	20,00	3,97	E	**6568813**
TDMX20100PKM	20,10	3,99	E	**6568814**
TDMX20200PKM	20,20	4,01	E	**6568815**
TDMX20239PKM	20,24	4,02	E	**6568816**
TDMX20300PKM	20,30	4,03	E	**6568817**
TDMX20400PKM	20,40	4,05	E	**6568818**
TDMX20500PKM	20,50	4,06	E	**6568819**
TDMX20600PKM	20,60	4,08	E	**6568820**
TDMX20650PKM	20,65	4,09	E	**6568841**
TDMX20700PKM	20,70	4,10	E	**6568842**
TDMX20800PKM	20,80	4,12	E	**6568843**

TDMX • Inserts • PK(M)

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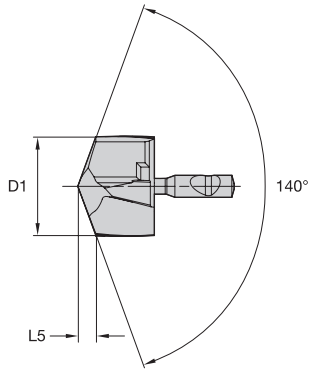

● first choice
○ alternate choice

P		●
M		○
K		●
N		
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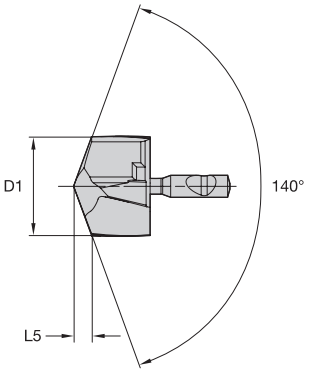
catalogue number	D1	L5	SSC	WP40PD
TDMX20900PKM	20,90	4,14	E	6568844
TDMX21000PKM	21,00	4,16	F	6568845
TDMX21430PKM	21,43	4,23	F	6568846
TDMX21500PKM	21,50	4,25	F	6568847
TDMX22000PKM	22,00	4,35	G	6568848
TDMX22225PKM	22,23	4,39	G	6568849
TDMX22450PKM	22,45	4,44	G	6568850
TDMX22500PKM	22,50	4,44	G	6568851
TDMX23000PKM	23,00	4,54	H	6568852
TDMX23500PKM	23,50	4,63	H	6568853
TDMX23813PKM	23,81	4,68	H	6568854
TDMX24000PKM	24,00	4,73	I	6568856
TDMX24500PKM	24,50	4,82	I	6568857
TDMX24605PKM	24,61	4,84	I	6568858
TDMX25000PKM	25,00	4,91	J	6568859
TDMX25400PKM	25,40	4,99	J	6568860
TDMX25500PKM	25,50	5,01	J	6568861
TDMX25670PKM	25,67	5,04	J	6568862
TDMX25700PKM	25,70	5,04	J	6568863
TDMX25760PKM	25,76	5,05	J	6568864
TDMX25796PKM	25,80	5,06	J	6568865
TDMX26000PKM	26,00	5,11	K	6568866
TDMX26192PKM	26,19	5,15	K	6568867
TDMX26400PKM	26,40	5,18	K	6568868
TDMX26500PKM	26,50	5,20	K	6568869
TDMX26589PKM	26,59	5,22	K	6568870
TDMX27000PKM	27,00	5,29	L	6568871
TDMX27500PKM	27,50	5,38	L	6568872
TDMX27780PKM	27,78	5,43	L	6568873
TDMX28000PKM	28,00	5,49	M	6568874
TDMX28176PKM	28,18	5,52	M	6568875
TDMX28500PKM	28,50	5,58	M	6568876
TDMX28575PKM	28,58	5,59	M	6568877
TDMX29000PKM	29,00	5,67	N	6568878
TDMX29367PKM	29,37	5,74	N	6568879
TDMX29500PKM	29,50	5,76	N	6568880

TDMX • Inserts • PK(M)

(continued)



● first choice
○ alternate choice

P		●
M		○
K		●
N		
S		
H		

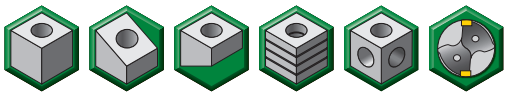
catalogue number	D1	L5	SSC	WP40PD
TDMX29764PKM	29,76	5,81	N	**6568891**
TDMX30000PKM	30,00	5,87	O	**6568892**
TDMX30163PKM	30,16	5,90	O	**6568893**
TDMX30500PKM	30,50	5,96	O	**6568896**
TDMX30955PKM	30,96	6,04	O	**6568897**
TDMX31000PKM	31,00	6,05	P	**6568898**
TDMX31500PKM	31,50	6,14	P	**6568899**
TDMX31750PKM	31,75	6,18	P	**6568900**
TDMX32000PKM	32,00	6,25	Q	**6568901**
TDMX32500PKM	32,50	6,34	Q	**6568902**
TDMX33000PKM	33,00	6,43	Q	**6568903**
TDMX33338PKM	33,34	6,49	Q	**6568904**
TDMX34000PKM	34,00	6,61	R	**6568905**
TDMX34130PKM	34,13	6,64	R	**6568906**
TDMX34925PKM	34,93	6,78	R	**6568907**
TDMX35000PKM	35,00	6,79	R	**6568908**
TDMX35500PKM	35,50	6,89	R	**6568909**
TDMX36000PKM	36,00	7,00	S	**6568910**
TDMX36500PKM	36,50	7,09	S	**6568911**
TDMX37000PKM	37,00	7,18	S	**6568912**
TDMX37500PKM	37,50	7,27	S	**6568913**
TDMX38000PKM	38,00	7,36	T	**6568914**
TDMX38100PKM	38,10	7,38	T	**6568915**
TDMX38500PKM	38,50	7,46	T	**6568916**
TDMX39000PKM	39,00	7,55	T	**6568917**
TDMX39289PKM	39,29	7,60	T	**6568918**
TDMX39500PKM	39,50	7,64	T	**6568919**
TDMX40000PKM	40,00	7,73	T	**6568920**

NOTE: SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.

Metric tolerance

D1	tolerance k8
8–10	0,000/+0,022
>10–17	0,000/+0,027
>17–18	0,000/+0,027
>18–21	0,000/+0,033

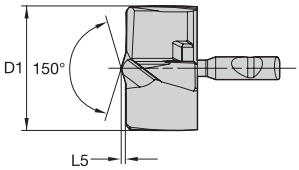
TDMX • Inserts • FPE(M)



● first choice
○ alternate choice

P		●
M		○
K		●
N		
S		
H		





catalogue number	D1	L5	SSC	WP40PD
TDMX16000FPEM	16,00	1,16	A	**6693048**
TDMX16281FPEM	16,28	1,17	A	**6693049**
TDMX16500FPEM	16,50	1,17	A	**6693050**
TDMX16667FPEM	16,67	1,17	A	**6693111**
TDMX17000FPEM	17,00	1,18	B	**6693112**
TDMX17064FPEM	17,06	1,18	B	**6693113**
TDMX17500FPEM	17,50	1,19	B	**6693114**
TDMX18000FPEM	18,00	1,28	C	**6693115**
TDMX18500FPEM	18,50	1,28	C	**6693116**
TDMX19000FPEM	19,00	1,29	D	**6693117**
TDMX19050FPEM	19,05	1,29	D	**6693118**
TDMX19500FPEM	19,50	1,30	D	**6693119**
TDMX19840FPEM	19,84	1,31	D	**6693120**
TDMX20000FPEM	20,00	1,39	E	**6693131**
TDMX20500FPEM	20,50	1,40	E	**6693132**
TDMX21000FPEM	21,00	1,40	F	**6693133**
TDMX21500FPEM	21,50	1,41	F	**6693134**
TDMX22000FPEM	22,00	1,50	G	**6693135**
TDMX22500FPEM	22,50	1,51	G	**6693136**
TDMX23000FPEM	23,00	1,51	H	**6693137**
TDMX23500FPEM	23,50	1,52	H	**6693138**
TDMX24000FPEM	24,00	1,61	I	**6693139**
TDMX24500FPEM	24,50	1,62	I	**6693140**
TDMX25000FPEM	25,00	1,62	J	**6693151**
TDMX25400FPEM	25,40	1,63	J	**6693152**
TDMX25500FPEM	25,50	1,63	J	**6693153**
TDMX26000FPEM	26,00	1,72	K	**6693154**
TDMX26400FPEM	26,40	1,72	K	**6693194**
TDMX26500FPEM	26,50	1,72	K	**6693155**
TDMX27000FPEM	27,00	1,73	L	**6693156**
TDMX27500FPEM	27,50	1,74	L	**6693157**
TDMX28000FPEM	28,00	1,83	M	**6693158**
TDMX28500FPEM	28,50	1,83	M	**6693160**
TDMX29000FPEM	29,00	1,84	N	**6693161**
TDMX29500FPEM	29,50	1,85	N	**6693162**
TDMX30000FPEM	30,00	1,93	O	**6693163**

TDMX • Inserts • FPE(M)

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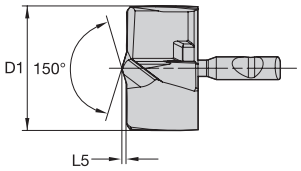


● first choice
○ alternate choice

P		●
M		○
K		●
N		
S		
H		

catalogue number	D1	L5	SSC	WP40PD
TDMX30500FPEM	30,50	1,94	O	**6693164**
TDMX31000FPEM	31,00	1,94	P	**6693165**
TDMX31500FPEM	31,50	1,95	P	**6693166**
TDMX31750FPEM	31,75	1,95	P	**6693167**
TDMX32000FPEM	32,00	2,08	Q	**6693168**
TDMX32500FPEM	32,50	2,08	Q	**6693169**
TDMX33000FPEM	33,00	2,09	Q	**6693170**
TDMX34000FPEM	34,00	2,10	R	**6693181**
TDMX35000FPEM	35,00	2,11	R	**6693182**
TDMX35500FPEM	35,50	2,12	R	**6693183**
TDMX36000FPEM	36,00	2,29	S	**6693184**
TDMX36500FPEM	36,50	2,29	S	**6693185**
TDMX37000FPEM	37,00	2,30	S	**6693186**
TDMX37500FPEM	37,50	2,30	S	**6693187**
TDMX38000FPEM	38,00	2,31	T	**6693188**
TDMX38100FPEM	38,10	2,31	T	**6693189**
TDMX38500FPEM	38,50	2,32	T	**6693190**
TDMX39000FPEM	39,00	2,32	T	**6693191**
TDMX39500FPEM	39,50	2,33	T	**6693192**
TDMX40000FPEM	40,00	2,33	T	**6693193**

NOTE: SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.

Metric tolerance

D1	tolerance k8
8–10	0,000/+0,022
>10–17	0,000/+0,027
>17–18	0,000/+0,027
>18–21	0,000/+0,033

Application Data • PK(M) • WP40PD • Metric

Material Group		Cutting Speed — Vc Range — m/min			Recommended Feed Rate (f) by Diameter					
		min	Starting Value	max	Tool Diameter (mm)	16,0	20,0	25,0	32,0	40,0
P	1	90	**125**	170	mm/r	0,19–0,45	0,25–0,48	0,25–0,52	0,28–0,57	0,29–0,60
	2	105	**140**	180	mm/r	0,23–0,46	0,28–0,50	0,30–0,52	0,33–0,57	0,35–0,60
	3	50	**75**	100	mm/r	0,23–0,46	0,28–0,50	0,30–0,52	0,33–0,57	0,35–0,60
	4	50	**75**	100	mm/r	0,19–0,45	0,22–0,48	0,25–0,50	0,28–0,55	0,29–0,58
	5	50	**65**	80	mm/r	0,16–0,32	0,18–0,36	0,22–0,42	0,24–0,46	0,25–0,48
	6	50	**65**	80	mm/r	0,16–0,32	0,18–0,36	0,22–0,42	0,24–0,46	0,25–0,48
M	1	40	**80**	110	mm/r	0,11–0,26	0,13–0,28	0,13–0,32	0,14–0,35	0,15–0,37
	2	35	**55**	75	mm/r	0,11–0,26	0,13–0,28	0,13–0,32	0,14–0,35	0,15–0,37
	3	20	**35**	50	mm/r	0,11–0,26	0,13–0,28	0,13–0,32	0,14–0,35	0,15–0,37
K	1	60	**95**	170	mm/r	0,25–0,48	0,28–0,52	0,32–0,56	0,35–0,62	0,37–0,65
	2	60	**75**	90	mm/r	0,25–0,48	0,28–0,52	0,32–0,56	0,35–0,62	0,37–0,65
	3	40	**65**	90	mm/r	0,21–0,44	0,23–0,48	0,25–0,50	0,28–0,55	0,29–0,58

NOTE: Through coolant recommended for greater than 3 x D applications.
Material group M is recommended for secondary applications.

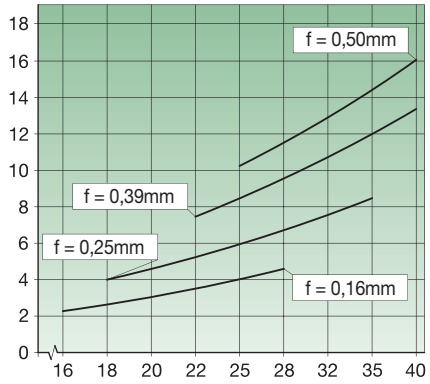
Application Data • FPE(M) • WP40PD • Metric

Material Group		Cutting Speed — Vc Range — m/min			Recommended Feed Rate (f) by Diameter					
		min	Starting Value	max	Tool Diameter (mm)	16,0	20,0	25,0	32,0	40,0
P	1	110	**140**	170	mm/r	0,17–0,25	0,19–0,29	0,23–0,38	0,26–0,43	0,33–0,76
	2	100	**120**	140	mm/r	0,19–0,25	0,22–0,29	0,29–0,38	0,32–0,43	0,33–0,76
	3	80	**100**	120	mm/r	0,15–0,23	0,17–0,25	0,23–0,34	0,26–0,38	0,33–0,66
	4	70	**90**	110	mm/r	0,13–0,23	0,14–0,25	0,18–0,34	0,21–0,38	0,26–0,66
M	1	40	**60**	80	mm/r	0,11–0,17	0,13–0,20	0,16–0,25	0,18–0,28	0,21–0,31
	2	35	**55**	70	mm/r	0,11–0,17	0,13–0,20	0,16–0,25	0,18–0,28	0,21–0,31
	3	20	**40**	60	mm/r	0,11–0,17	0,13–0,20	0,16–0,25	0,18–0,28	0,21–0,31
K	1	90	**135**	175	mm/r	0,19–0,25	0,22–0,29	0,29–0,38	0,32–0,43	0,33–0,76
	2	80	**120**	140	mm/r	0,19–0,25	0,22–0,29	0,29–0,38	0,32–0,43	0,33–0,76
	3	70	**110**	125	mm/r	0,18–0,26	0,21–0,29	0,23–0,37	0,25–0,42	0,27–0,57
S	1	20	**40**	60	mm/r	0,11–0,17	0,13–0,20	0,16–0,25	0,18–0,28	0,21–0,31
	3	15	**30**	45	mm/r	0,11–0,17	0,13–0,20	0,16–0,25	0,18–0,28	0,21–0,31

NOTE: Through coolant recommended for greater than 3 x D applications.
Material group M is recommended for secondary applications.

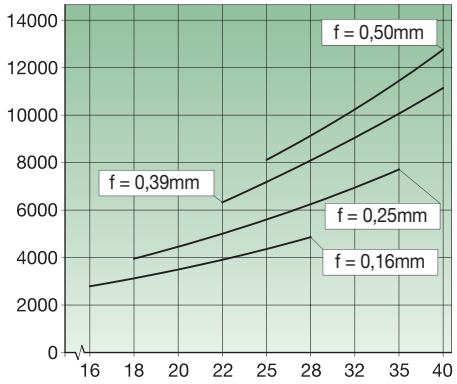
TDMX Application Notes • Power and Coolant Requirements

Drive Power (kW)



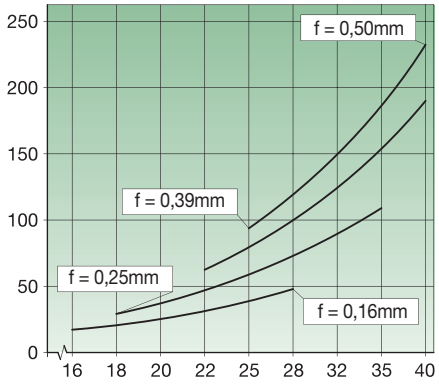
Ò Drive power Ps [kW]
Drill diameter d1 [mm]

Feed Force (kN)



Ò Feed force Ff [kN]
Drill diameter d1 [mm]

Torque (Nm)



Ò Torque Md Md [Nm]
Drill diameter d1 [mm]

NOTE: The diagrams above are used to determine the drive power, feed force, and torque. They are based on cutting force measurement in tempered steels in Cgr. 6. Tensile strength: Rm = 600 N/mm2. The base cutting speed used is: vc = 80 m/min.

TDMX • Regrinding Length • FPE(M) • Metric

SSC	diameter range D	L min.	L new
A	16–16,999	9,8	10,8
B	17–17,999	9,8	10,8
C	18–18,999	10,6	11,7
D	19–19,999	10,6	11,7
E	20–20,999	11,4	12,6
F	21–21,999	11,4	12,6
G	22–22,999	12,1	13,4
H	23–23,999	12,1	13,4
I	24–24,999	13,0	14,4
J	25–25,999	13,0	14,4
K	26–26,999	13,8	15,3
L	27–27,999	13,8	15,3
M	28–28,999	14,8	16,4
N	29–29,999	14,8	16,4
O	30–30,999	15,6	17,3
P	31–31,999	15,6	17,3
Q	32–33,999	17,8	19,7
R	34–35,999	17,8	19,7
S	36–37,999	19,4	21,5
T	38–40,000	19,4	21,5

NOTE: SSC = Pocket Seat Reference. To correspond with the SSC on the inserts.

TDMX • Regrinding Length • PK(M) • Metric

SSC	diameter range D	L min.	L new
A	16–16,999	11,2	12,5
B	17–17,999	11,2	12,5
C	18–18,999	12,2	13,6
D	19–19,999	12,2	13,6
E	20–20,999	13,2	14,7
F	21–21,999	13,2	14,7
G	22–22,999	14,2	15,8
H	23–23,999	14,2	15,8
I	24–24,999	15,2	16,9
J	25–25,999	15,2	16,9
K	26–26,999	16,2	18
L	27–27,999	16,2	18
M	28–28,999	17,2	19,1
N	29–29,999	17,2	19,1
O	30–30,999	18,2	20,2
P	31–31,999	18,2	20,2
Q	32–33,999	20,1	22,3
R	34–35,999	20,1	22,3
S	36–37,999	22,1	24,5
T	38–40,000	22,1	24,5

The following coolant pressure is recommended:

relative drilling depth	coolant pressure
1–3 x D	8 bars
5 x D	12 bars
7 x D	20 bars
10 x D	30 bars

